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PTO/SB/08A (10-01)

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Sheet	1	of	11	Application Number	
				Filing Date	
				First Named Inventor	
				Group Art Unit	
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U.S. PATENT DOCUMENTS					
Examiner Initials *	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
TK	1	US- 6056954	05/02/00	Fischetti, et al.	
↓	2	US- 5997862	12/07/89	Fischetti, et al.	
↓	3	US- 5985271	11/16/99	Fischetti, et al.	
↓	4	US- 5688501	11/18/97	Memil, et al.	
↓	5	US- 4742981	05/10/88	Converse	
↓	6	US- 2018789	11/05/35	Mahannah	
↓	7	US- 2763931	09/25/56	McMillan	
↓	8	US- 5479732	01/02/98	Burtch, et al.	
↓	9	US- 3465445	09/09/69	Fisher	
↓	10	US- 2315260	03/30/43	Lancaster	
↓	11	US- 5604109	02/18/97	Fischetti, et al.	
↓	12	US- 5260292	11/09/93	Robinson, et al.	
↓	13	US- 4957686	09/18/90	Norris	
↓	14	US- 6017528	01/25/00	Fischetti, et al.	
↓	15	US- 6132970	10/17/00	Stemmer	
↓	16	US- 3852424	12/03/74	Gaeumann, et al.	
↓	17	US- 6264945	07/24/01	Fischetti, et al.	
↓	18	US- 6254866	07/03/01	Fischetti, et al.	
↓	19	US- 6248324	06/18/01	Fischetti, et al.	
↓	20	US- 6238661	05/29/01	Fischetti, et al.	

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		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				
TK	21	EP-0510907 A 2	10/28/92	Agricultural & Food Res.		
↓	22	WO-9702351	01/23/97	CIBA Geigy AG, et al.		
↓	23	WO-9607329	03/14/96	Univ. Maryland		
↓	24	WO-9904809	02/04/99	Ambi, Inc.		
↓	25	FR-2357246	02/03/78	Martinez		
↓	26	WO-9531562	11/23/95	Quest International B.V.		
↓	27	EP-587541 A1	03/16/94	Tecnogen ScpA		

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¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04.

³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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TK	28	US- 6056955	05/02/00	Fischetti, et al.	
	29	US- 5882631	03/16/99	Suga, et al.	
	30	US- 5741487	04/21/98	Asai, et al.	
	31	US- 6113887	09/05/00	Mori, et al.	
	32	US- 4122158	10/24/78	Schmitt	
	33	US- 3983209	09/28/76	Schmitt	
	34	US- 4885163	12/05/89	Shaar, et al.	
	35	US- 6177554	01/23/01	Woo, et al.	
	36	US- 6187757	02/13/01	Clackson, et al.	
	37	US- 5162226	11/10/92	Beachey, et al.	
	38	US- 6335012	01/01/02	Fischetti, et al.	
	39	US- 6326002	12/04/01	Fischetti, et al.	
	40	US- 6277399	08/21/01	Fischetti, et al.	
	41	US- 4062941	12/13/77	Davies	
	42	US- 5571667	11/05/88	Chu, et al.	
	43	US- 5514602	05/07/96	Brooks Jr, et al.	
	44	US- 5500350	03/19/96	Baker, et al.	
	45	US- 5384265	01/24/95	Kidwell, et al.	
	46	US- 4361537	11/30/82	Deutsch, et al.	
	47	US- 5120643	06/09/92	Ching, et al.	

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TK	48	WO-9323544	11/25/93	The University Court of the University of Glasgow		
	49	EP-0293249 A1	11/30/88	Amrad Corporation Limited		
	50	EP-0646646 A2	04/05/95	Bristol-Myers Squibb Company		
	51	EP-0359873 A1	03/28/90	The Public Health Research Inst. of the City of New York		

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TK	52	US-4948726	08/14/80	Longoria	
	53	US- 4459361	07/10/84	Gefter	
	54	US- 4552839	11/12/85	Gould, et al.	
	55	US- 4313734	02/02/82	Leuversing	
	56	US- 4847189	07/11/89	Snyder, et al.	
	57	US- 4497900	02/05/85	Abram, et al.	
	58	US- 4707543	11/17/87	Zollinger, et al.	
	59	US- 5763251	06/09/98	Gasson	
	60	US- 6159688	12/12/00	Borchert, et al.	
	61	US- 4784948	11/15/88	Scott, et al.	
	62	US- 5760026	06/02/98	Blackburn, et al.	
	63	US- 5602040	02/11/97	May, et al.	
	64	US- 4521252	06/04/85	Miyake, et al.	
	65	US- 4355022	10/19/82	Rabussay	
	66	US- 4115546	09/19/78	Vidra, et al.	
	67	US- 4116327	09/26/78	Eglinton, et al.	
	68	US- 3929994	12/30/75	Hirsch, et al.	
	69	US- 6083684	07/04/00	Gasson	
	70	US- 5360617	11/01/94	Gasson	
	71	US- 5079174	01/07/92	Buck, et al.	

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		Number - Kind Code ² (if known)			
TK ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	72	US- 5604110	02/18/97	Baker, et al.	
	73	US- 5294369	03/15/94	Shigekawa, et al.	
	74	US- 5372931	12/13/94	Friedman, et al.	
	75	US- 4933185	06/12/90	Wheatley, et al.	
	76	US- 5108758	04/28/92	Allwood, et al.	
	77	US- 4713249	12/15/87	Schroder	
	78	US- 4812445	03/14/89	Eden, et al.	
	79	US- 3622677	11/23/71	Short, et al.	
	80	US- 4369308	01/18/83	Trubiano	
	81	US- 5393658	02/28/95	Olsen	
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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

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TK	82	KH Nasibulini et al; RU-2103991; Composition for treating streptococcal diseases - comprises purified concentrate of streptococcal bacteriophage, solution of quinosol, dry lanolin, albumin and vegetable oil; XP-002141110	
TK	83	LD Demidova et al; RU2064299; Cattle mastitis therapeutic preparation - comprises lyso: amidase of specific lytic activity and mono- and di-basic sodium phosphate(s); XP-002141111	

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TK	84	BABENKO et al. Enzymatic lysis of staphylococci in relation to their species and strain properties, 1990, Database Medline Online, US National Library of Medicine, Bethesda, MD, US, Database Accession No. 90297672 XP002170795, abstract only	
	85	BARTELL, et al., Origin of polysaccharide depolymerase associated with bacteriophage infection, Journal of Virology, March 1969, pp. 290-296, Vol. 3, No. 3	
	86	BEHNKE, et al., Cloning and expression in Escherichia coli, Bacillus subtilis and Streptococcus sanguis of a gene for staphylokinase - a bacterial plasminogen activator, Mol Gen Genet, December 1987, pp. 528-534, Vol. 210	
	87	BESSEN, et al., Chemical characterization of binding properties of opacity-associated protein II from Neisseria gonorrhoeae, Infection and Immunity, January 1987, pp. 141-147, Vol. 55, No. 1	
	88	BIZIULEVICHUS, et al., In vivo studies on lysosubtilin: 3. Efficacy for treatment of mastitis and superficial lesions of the udder and teats in cows, 1998, Database Biosis Online, Biosciences Information Service, Philadelphia, PA, US, Database Accession No. PREV199800492606, XP002183274, abstract only	
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	91	YOUNG et al. Phages will out: strategies of host cell lysis, Trends in Microbiology, Volume 8 No. 3, March 2000, pp 120-127	
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	94	DIAZ, et al., Chimeric phage-bacterial enzymes: a clue to the modular evolution of genes, Proc. Natl. Acad. Sci. USA, October 1990, pp. 8125-8129, Vol. 87	

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TK	95	DIAZ, et al., Chimeric pneumococcal cell wall lytic enzymes reveal important physiological and evolutionary traits, Journal of Biological Chemistry, March 25, 1991, pp. 5464-5471, Vol. 266, No. 9	
	96	DIXON, et al., Lysostaphin: an enzymatic approach to staphylococcal disease. III. Combined lysostaphin-methicillin therapy of established staphylococcal abscesses in mice, The Yale Journal of Biology and Medicine, August 1968, pp. 62-68, Vol. 41, No. 1	
	97	FISCHETTI, et al., Size variation of the M protein in group A streptococci, Journal of Exp. Med., June 1, 1985, pp. 1384-1401, Vol. 161, No. 6	
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	101	GERARDY-SCHANN, et al., Molecular cloning and functional expression of bacteriophage PK1E-encoded endoneuraminidase Endo NE, Molecular Microbiology, May 1995, pp. 441-450, Vol. 16, No. 3	
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TK	106	HAYASHIDA, et al., Further characterization of PL-1 phage associated N-acetylmuramidase of Lactobacillus casei, Journal of General Microbiology, May 1987, pp. 1343-1349, Vol. 133, No. 5	
	107	HIGUCHI, et al., Transfection of streptococcus sanguis by phage deoxyribonucleic acid isolated from streptococcus mutans, Infection and Immunity, March 1977, pp. 945-949, Vol. 15, part 3	
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	111	LAWMAN, et al., Molecular cloning of the extracellular endodextranase of streptococcus salivarius, Journal of Bacteriology, December 1991, pp. 7423-7428, Vol. 173, No. 23	
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	113	LOESSNER, et al., Modified listeria bacteriophage lysis genes (ply) allow efficient overexpression and one - step purification of biochemically active fusion proteins, Applied and Environmental Microbiology, August 1996, pp. 3057-3060, Vol. 62, No. 8	
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	115	LOPEZ, et al., The pneumococcal cell wall degrading enzymes a modular design to create new lysins, Microbial Drug Resistance, November 2, 1997, pp. 199-211, Vol. 3, No. 2	
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TK	117	MUKHLIS, et al., Characterization and Immunogenicity of HSV-1 antigens obtained following zwitterionic detergent treatment; Vaccine, September 1986, pp. 191-196, Vol. 4	
	118	NELSON, et al., Prevention and elimination of upper respiratory colonization of mice by group A streptococci by using a bacteriophage lytic enzyme, PNAS, March 27, 2001, pp. 4107-4112, Vol. 98, No. 7	
	119	NELSON, et al., Selective and rapid killing of group A streptococci using a muralytic enzyme, Database Biosis Online, Biosciences Information Service, Philadelphia, PA, US and abstracts of the General Meeting of the American Society for Microbiology. 2000, pp. 32-33	
	120	OKI, et al., Functional and structural features of the holin HOL protein of the Lactobacillus plantarum phage analysis in escherichia coli system, Gene, 1997, pp. 137-145, Vol. 197	
	121	OKUHARA, et al., Preparation of group A streptococcal cell membranes by treatment with group C streptococcus phage - associated lysin, Annales Paediatrici Japonici, June 1983, pp. 10-19, Vol. 29, No. 2	
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	123	POLAK, et al., In vitro activity of recombinant lysostaphin-antibiotic combinations toward methicillin-resistant staphylococcus aureus, Diagn. Microbiol. Infect. Dis., 1993, pp. 265-270, Vol. 17	
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OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

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TK	128	SHEEHAN, et al., Analysis of the catalytic domain of the lysis of the lactococcal bacteriophage Tuc2009 by chimeric gene assembling; FEMS Microbiology Letters, 1996, pp. 23-28, Vol. 140	
	129	SHEEHAN, et al., The lytic enzyme of the pneumococcal phage Dp-1: A chimeric lysis of intergeneric origin, Molecular Microbiology, 1997, pp. 717-725	
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	131	YARNALL, et al., Isolation and partial characterization of a type II Fc receptor from a group A streptococcus, Molecular and Cellular Biochemistry, 1986, pp. 57-66, Vol. 70	
	132	CISANI, et al., High-level potentiation of lysostaphin anti-staphylococcal activity by lysozyme, Antimicrobial Agents and Chemotherapy, April 1982, pp. 531-535, Vol.21, No. 4	

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U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
TK	133	US-5605793	02/25/97	Stemmer	
	134	US- 6355477	03/12/02	Fischetti et al	
	135	US- 6331405	12/18/01	Rambukkana et al	
	136	US- 6180659	02/20/01	Pancholi et al	
	137	US- 5985654	11/16/99	Fischetti et al	
	138	US- 5842314	11/24/98	Scott et al	
	139	US- 5910441	06/08/99	Rocha et al	
	140	US- 5786205	07/28/98	Fischetti et al	
	141	US- 5976792	11/02/99	Cheung et al	
	142	US- 5821088	10/13/98	Darzins et al	
	143	US- 5723303	03/03/98	Fischetti et al	
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	145	US- 5707822	01/13/98	Fischetti et al	
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	150	US- 5352588	10/04/94	Fischetti et al	
	151	US- 5968763	10/19/99	Fischetti et al	
	152	US- 4784948	11/15/88	Scott et al	

FOREIGN PATENT DOCUMENTS

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TK	153	WO 03/024410 A2	03/27/03	Fischetti et al		

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